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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CROUSE, BRETT ALAN

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,866	Applicant(s) COCHET ET AL.	
	Examiner Brett A. Crouse	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment, filed 14 May 2008, which amends claims 21 and 38. Claims 21-40 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 21-29, and 35-39 stand rejected under 35 U.S.C. 102(b) as being anticipated by Ermantraut et al., WO 02/077620, as evidenced by US 2004/0196455, which is being used as a translation.

Ermantraut teaches:

As to claims 21, 26, 27, 28:

Paragraph [0030], teaches it is the object of Ermantraut to provide devices for the calibration of fluorescence detection systems.

Paragraph [0033], teaches the device can comprise one or more fluorescent layers. The fluorescent materials are applied to defined regions.

Paragraphs [0038]-[0039], teach the fluorescent layers can be one or more polymer layers. Each layer can comprise one or more fluorescent materials.

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Paragraph [0044], teaches the intensity of the fluorescence in each of the defined regions can be selected.

Paragraphs [0046]-[0047], claim 8, teach the intensity of the fluorescence can be selected by physical treatment methods, such as by irradiating the polymer layers. The passage additionally teaches that the polymer is photosensitive. The passage additionally postulates the degree of linkage or cross-linkage is responsible for the intensity of fluorescence and teaches that one of ordinary skill in the art can selectively control the degree of cross-linking. This is held to teach that a person of ordinary skill can select a degree of cross-linking including non-crosslinked.

As to claims 22, 23, 35, 36, 38, 39:

Figure 1, teaches multiple layers of fluorescent material deposited in distinct regions. The regions can be individually irradiated. The figure additionally teaches openings to the level of the substrate. The figure also teaches the method of depositing one or more layers of fluorescent material and selectively exposing regions of the fluorescent material.

Paragraphs [0096]-[0117], Examples 1 and 2, figure 1, teach forming multiple regions having one or more layers. The layers can have multiple regions of polymer having various intensities due to variation in thickness and/or composition. Regions of the substrate are additionally not covered by polymer.

As to claim 29:

Paragraph [0111], example 2, figure 2B, teaches a glass substrate.

As to claim 37:

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Paragraphs [0059]-[0060], teach integrating the fluorescent polymer regions with biological samples.

As to claims 24, 25:

Paragraphs [0096]-[0117], Examples 1 and 2, figure 1, teach multiple areas of fluorescence and openings to the level of the substrate. Glass is used as the substrate in examples 1 and 2. It is the examiner's position that the glass substrate is non-fluorescent and as such would inherently exhibit fluorescence at least 10 or at least 100 times lower than the first fluorescence level.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 30-34 and 40 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ermantraut et al., WO 02/077620, as evidenced by US 2004/0196455, which is being used as a translation, as applied to claims 21-23, 26-29 and 35-39 above, and further in view of Yamasaki et al., US 6,242,114.

The teachings of Ermantraut as in the rejection above are relied upon.

Ermantraut does not teach:

Ermantraut does not teach the use or deposition of a protective coating layer.

Yamasaki teaches:

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Column 1, lines 5-10, teach fluorescence references for checking the operation of fluorescence measuring devices.

Column 4, lines 45-65, figures 2-10, teach various structures of fluorescence references comprising one or more protective layers. The layers provide improved environmental durability and improved durability to cleaning and handling.

Column 6, line 63 through column 7, line 9, figure 13, teaches the formation of fluorescence reference bodies as part of a card and subsequently depositing an encapsulation layer (protective layer).

It would have been obvious to one of ordinary skill in the art at the time of invention to deposit one or more protective layers of Yamasaki upon the fluorescence reference of Ermantraut in order to improve the durability of the devices of Ermantraut. It would have additionally been obvious to deposit one or more protective layers after the formation of the fluorescent layer(s) and any irradiation of the device of Ermantraut in order to protect the protective layers from degradation caused by the irradiation and to reduce the exposure time during possessing by reducing attenuation of the irradiating signal by an intervening layer(s).

Response to Arguments

6. Applicant's arguments have been fully considered but they are not persuasive.

With respect to the rejections over Ermantraut and Ermantraut in view of Yamasaki applicant argues the following points:

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1. Ermantraut fails to teach or suggest first and second fluorescence levels respectively defined by a non-exposed part and by at least one exposed zone of said thin layer, the second fluorescence level being lower than the first fluorescence level.
2. Ermantraut fails to teach or suggest a degree of cross-linkage.
3. The radiation exposure of Ermantraut is used solely for polymerization allowing the exposed portion to be removed and the reference does not teach the use of irradiation to control fluorescence.
4. The bleaching behavior taught by Ermantraut fails to teach or suggest the first and second fluorescence levels are respectively defined by a non-exposed part and by at least one exposed zone of said thin layer, the second fluorescence level being lower than the first fluorescence level.

The examiner respectfully disagrees for the reasons below.

With regard to the points, that the Ermantraut reference does not teach or suggest the first and second fluorescence levels are respectively defined by a non-exposed part and by at least one exposed zone of said thin layer, the second fluorescence level being lower than the first fluorescence level, applicant points to paragraph [0046] as not teaching such a limitation and that the reference has been misinterpreted. Paragraph [0046] directly teaches “*a further option for setting the intensity of fluorescence calibration standards produced according to the invention consists of subjecting the polymer layers according to the invention to physical treatment methods such as irradiation*”. The paragraph also teaches “*the degree of linkage or cross-linkage of the polymer layers, and correspondingly the fluorescence characteristics of the polymer layers, are changed by means of these treatment methods. The average person skilled in the art*”.

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is familiar with the term "degree of linkage" or "degree of cross-linkage". In particular, polymers comprising duroplastic cross-linkage, e.g. the above-mentioned photosensitive coatings such as SU8, are suitable for setting the intensity of polymer layers by means of methods for altering the degree of cross-linkage". Paragraph [0047] then teaches "*applying polymer layers of different thickness and/or different composition and/or different degree of cross-linkage to several defined regions on the same carrier*". Additionally with regard to points 2 and 3, these differing regions of the carrier will then exhibit differing fluorescent levels pertinent to points 1 and 4. The production of which can be controlled by the degree of irradiation and resulting cross-linking.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brett A. Crouse whose telephone number is (571)-272-6494. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald L. Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. A. C./
Examiner, Art Unit 1794

/Jill Gray/
Primary Examiner, Art Unit 1794